

### **Remarks**

In this Response claims 2, 3, 11, 19-22, 25, 27, 37, and 40 are cancelled, without prejudice; claims 8-10, 12-13, 16, 34-36, 39, and 41 are amended; and claims 42-46 are added. These amendments and added claims are fully supported by the originally filed application. No new matter has been added.

Claims 6, 8-10, 12-14, 16, 23, 34-36, 39, and 41-46 are presented for examination.

### **Claim Rejections – 35 U.S.C. § 103(a)**

In the Office Action, claims 8-10, 16, 23, 25, 27, 34, 36-37, and 39-41 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kan et al. (Air Cooling of High-Power Modules with Low Profile Piezoelectric Fans, IBM Technical Disclosure Bulletin, Feb. 2004)(hereinafter "*Kan*"). Claims 25, 27, 37, and 40 have been cancelled rendering their rejections moot. Claim 41 has been amended to recite limitations originally found in previous claim 11 with other additional limitations. Other references cited in the Office Action to reject other claims will also be discussed below with reference to claim 41 as some additional limitations of claim 41 are similar to limitations found in other previous claims that are rejected over these references.

Claim 41 has been amended and now recites:

A standardized peripheral apparatus comprising  
a board;  
an integrated circuit coupled to the board;  
a case, encasing the integrated circuit and the board, having a form factor including a plurality of external dimensions compatible with a Personal Computer Memory Card International Association (PCMCIA) standard having a plurality of specifications governing the form factor and the external dimensions;  
a thermal management arrangement including  
a vent disposed on an end of a top surface of the case to at least facilitate an exhaust of heat convectively emitted from the integrated circuit into an ambient, and  
a jet actuator coupled to the board to provide an air current to at least facilitate the exhaust of the convectively emitted heat through the vent,

wherein the vent is an outlet vent disposed on a first portion of the top surface of the case; and  
an inlet vent disposed on the end of and a second portion of the top surface of the case, to facilitate an intake of air from the ambient; and  
at least one partition disposed inside the case using available space to provide a plurality of air flow chambers.

As can be seen, claim 41 as amended recites, among other things, "at least one partition disposed inside the case using available space to provide a plurality of air flow chambers." These limitations are found in previous claim 11 and *Ito* (JP2000-82890) (hereinafter "*Ito*"), which is cited to reject claim 11 teaches a fan and a groove in contrast to a jet actuator and air flow chambers respectively as recited in claim 41. However, *Ito* does not teach a board, an integrated circuit coupled to the board, and/or "at least one partition disposed inside the case using available space" as recited in claim 41. Even assuming there was sufficient motivation to combine the board and the integrated circuit coupled to the board with a cooling fan unit of *Ito*, *Ito* cannot be said to disclose or suggest "at least one partition disposed inside the case using available space" because *Ito* cannot define the available space after keeping spaces for the board and the integrated circuit without even having these elements.

*Kan* teaches a piezoelectric fan that "can be easily mounted on the circuit card without sacrificing valuable packaging space." However, *Kan* teaches, only generally, not sacrificing valuable packaging space without teaching any form factor of the package, an integrated circuit in the package, much less at least one partition disposed inside the package. *Kan* cannot be said to disclose or suggest "at least one partition disposed inside the case using available space" because *Kan* cannot define the available space without having above mentioned elements.

Kitahara (JP2000-099209)(hereinafter "*Kitahara*") teaches a first opening 7 and a second opening 8 disposed on a top surface of the case. See, e.g., fig. 7 of *Kitahara*. However, *Kitahara* does not teach disposing the inlet vent and the outlet vent, both disposed on the same end of the top surface of the case. Also, the deficiencies of *Ito* and *Kan* as described above with respect to amended claim 41 are not cured by the teachings of *Kitahara*.

Wyatt et al. (US 6,972,950)(hereinafter "*Wyatt*") is cited for the proposition that it teaches an air flow generator positioned substantially near an inlet vent. However, the deficiencies of *Ito*, *Kan*, and *Kitahara* as described above with respect to amended claim 41 are not cured by the teachings of *Wyatt*.

Thus, for at least these reasons, claim 41 is patentable over *Ito*, *Kitahara*, *Wyatt*, and *Kan*, whether alone or in combination.

As for claims 8-10, 16, 23, 34, 36, and 39, claims 8-10, 16, 23, 34, 36, and 39 depend from claim 41, incorporating its recitations.

Thus, for at least the same reasons that amended claim 41 is patentable over *Ito*, *Kitahara*, *Wyatt*, and *Kan*, claims 8-10, 16, 23, 34, 36, and 39 are likewise patentable over *Ito*, *Kitahara*, *Wyatt*, and *Kan*. Accordingly, the Applicants respectfully request that the Examiner withdraw this rejection.

In the Office Action, claims 2-3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kan* in view of *Kitahara*. Claims 2-3 have been cancelled rendering their rejections moot.

In the Office Action, claims 6 and 19-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kan* in view of *Wyatt*. Claims 19-22 have been cancelled rendering their rejections moot. Claim 6 depends from claim 41, incorporating its recitations. For at least the same reasons that amended claim 41 is patentable over *Ito*, *Kitahara*, *Wyatt*, and *Kan*, claim 6 is likewise patentable over *Ito*, *Kitahara*, *Wyatt*, and *Kan*. Accordingly, the Applicants respectfully request that the Examiner withdraw this rejection.

In the Office Action, claims 11-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kan* in view of *Ito*. Claim 11 has been cancelled rendering its rejections moot. Claims 12-14 depend from claim 41, incorporating its recitations. For at least the same reasons that amended claim 41 is patentable over *Ito*, *Kitahara*, *Wyatt*, and *Kan*, claims 12-14 are likewise patentable over *Ito*, *Kitahara*, *Wyatt*, and *Kan*. Accordingly, the Applicants respectfully request that the Examiner withdraw this rejection.

In the Office Action, claim 35 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kan* in view of *Ito* and further in view of *Wyatt*. Claim 35 depends from

claim 41, incorporating its recitations. For at least the same reasons that amended claim 41 is patentable over *Ito, Kitahara, Wyatt*, and *Kan*, claim 35 is likewise patentable over *Ito, Kitahara, Wyatt*, and *Kan*. Accordingly, the Applicants respectfully request that the Examiner withdraw this rejection.

#### **New claim**

New claims 42-46 have been added. New claims 42-46 depend from amended independent claim 41, incorporating its recitations. Further, new claims 42-46 recite features that are not taught or suggested by *Kan, Kitahara, Ito*, and/or *Wyatt*. For at least the same reasons that amended claim 41 is patentable over *Ito, Kitahara, Wyatt*, and *Kan*, claims 42-46 are likewise patentable over *Ito, Kitahara, Wyatt*, and *Kan*.

#### **Conclusion**

For these reasons, a Notice of Allowance is respectfully requested. If the Examiner has any questions concerning the present paper, the Examiner is kindly requested to contact the undersigned at (503) 796-2084. If any fees are due in connection with filing this paper, the Commissioner is authorized to charge Deposit Account No. 500393.

Respectfully submitted,  
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